

Patent claims

203em02

1. A food-coating composition comprising an aqueous copolymer poly(vinyl ester) dispersion which comprises
 - A) 100 parts by weight of a copolymer of from 40 to 95% by weight of vinyl esters of aliphatic saturated carboxylic acids, from 5 to 60% by weight of maleic esters and/or fumaric esters of monohydric aliphatic alcohols having a chain length of C₁-C₁₈ and optionally other comonomers,
 - B) from 0.1 to 1.0 parts by weight of an emulsifier,
 - C) from 0 to 0.45 parts by weight of a cellulose ether,
- 15 and
- D) optionally other stabilizers.
- 20 2. The food-coating composition as claimed in claim 1, wherein the dispersion comprises, as vinyl ester of aliphatic saturated carboxylic acids a vinyl ester of aliphatic saturated carboxylic acid with chain length C₂-C₁₈, preferably vinyl acetate, vinyl propionate, vinyl butyrate, vinyl isobutyrate, vinyl pivalate, vinyl 2-ethylhexanoate, vinyl esters of α-branched carboxylic acids having 9 to 11 carbons in the acid group or vinyl esters of lauric, palmitic, myristic and stearic acids or mixtures of these, preferably vinyl acetate.
- 25 3. The food-coating composition as claimed in claim 1, wherein the dispersion comprises the vinyl esters of aliphatic saturated carboxylic acids in an amount of at least 50% by weight.
- 30 4. The food-coating composition as claimed in claim 1, wherein the dispersion comprises, as maleic and fumaric esters of monohydric aliphatic alcohols of chain length C₁-C₁₈, esters of saturated alcohols of chain length C₁-C₁₈, or esters of monohydric aliphatic unsaturated alcohols of chain length C₃-C₁₈, preferably esters with saturated alcohols of chain length C₄-C₈, in particular dibutyl maleate or di 2-ethylhexylmaleate and/or di-2-ethylhexylfumarate.

5. The food-coating composition as claimed in claim 1, wherein the dispersion comprises the monomer group of maleic and fumaric esters, optionally in combination with other comonomers, in an amount of from 20 to 50% by weight.
6. The food-coating composition as claimed in claim 1, wherein the dispersion comprises, as emulsifiers, component B), sodium salts, potassium salts and ammonium salts of unbranched aliphatic carboxylic acids of chain length C₁₂-C₂₀, sodium hydroxyoctadecanesulfonate, sodium salts, potassium salts and ammonium salts of hydroxyl fatty acids of chain length C₁₂-C₂₀ and their sulfonation or acetylation products, alkyl sulfates, triethanolamine salts, alkyl(C₁₀-C₂₀)sulfonates, alkyl(C₁₀-C₂₀)-arylsulfonates, dimethyldialkyl(C₈-C₁₈)ammonium chloride, acyl-, alkyl-, 15 oleyl- and alkylarylethoxylates and their sulfonation products, alkali metal salts of sulfosuccinic esters with aliphatic saturated monohydric alcohols of chain length C₄-C₁₆, sulfosuccinic 4-esters with polyethylene glycol ethers of monohydric aliphatic alcohols of chain length C₁₀-C₁₂(disodium salt), sulfosuccinic 4-esters with polyethylene glycol nonylphenyl ethers 20 (disodium salt), sulfosuccinic biscyclohexyl esters (sodium salt), lignosulfonic acid and also its calcium, magnesium, sodium and ammonium salts, polyoxyethylene sorbitan monooleate containing 20 ethylene oxide groups, resin acids, hydrogenated and dehydrogenated resin acids and their alkali metal salts, dodecylated diphenyl ether disulfonic acid sodium or 25 copolymers of ethylene oxide and propylene oxide having a minimum content of 10% by weight of ethylene oxide, preferably sodium lauryl sulfate, sodium lauryl ether sulfate, polyethylene glycol (4-20) ethers of oleyl alcohol or polyethene oxide (4-14) ethers of nonylphenol.
- 30 7. The food-coating composition as claimed in claim 1, wherein the dispersion comprises the emulsifiers in an amount in the range of from 0.2 to 0.85 parts by weight, preferably from 0.25 to 0.5 parts by weight.
8. The food-coating composition as claimed in claim 1, wherein the dispersion, as component C), comprises cellulose ethers, preferably methyl cellulose, hydroxyethyl and propyl cellulose, or sodium carboxymethyl cellulose or mixtures of these.
- 35 9. The food-coating composition as claimed in claim 1, wherein the

dispersion comprises the cellulose ethers in an amount in the range from 0 to 0.4 parts by weight, preferably from 0 to 0.3 parts by weight, particularly preferably from 0 to 0.15 parts by weight, and very particularly preferably no cellulose ethers.

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10. The food-coating composition as claimed in claim 1, wherein the dispersion, as other stabilizer, comprises polyvinyl alcohol which has a degree of hydrolysis in the range from 85 to 90 mol% and which has a viscosity of its 4% by weight aqueous solution at a temperature of 20°C in 10 the range from 2 to 70 mPa·s.

15. The food-coating composition as claimed in claim 1, wherein the total amount of polyvinyl alcohol in the dispersion is in the range from 1 to 10% by weight, based on the mass of the total monomers, preferably from 2 to 9% by weight, and particularly preferably from 3 to 8% by weight.

12. The food-coating composition as claimed in claim 10, wherein the other stabilizer is a mixture of polyvinyl alcohols with uniform degree of hydrolysis.

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13. The food-coating composition as claimed in claim 1, wherein it comprises an aqueous copolymer poly(vinyl ester) dispersion which comprises

25 A) 100 parts by weight of a copolymer of from 40 to 95% by weight of vinyl acetate and from 5 to 60% by weight of dibutyl maleate and/or fumarate, and optionally other comonomers,

30 B) from 0.25 to 0.5 parts by weight of an ethoxylated oleyl alcohol,

C) from 0 to 0.3 parts by weight of a hydroxyethyl cellulose

and also

35 D) from 3 to 8 parts by weight of polyvinyl alcohol

and the solids content of the dispersion is in the range from 20 to 65% by weight, preferably from 30 to 60% by weight, particularly preferably from 40 to 55% by weight.

14. A process for preparing an aqueous copolymer poly(vinyl ester) dispersion as a constituent in a food-coating composition as claimed in claim 1 by free-radical emulsion polymerization, in which the monomers are added in the batch process, in the feed-stream process, or in the combined batch/feed-stream process, which comprises, preferably, monomers being charged in an amount in the range from 1 to 15% by weight, based on the total amount of monomers, for starting the polymerization.

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10 15. The use of an aqueous copolymer poly(vinyl ester) dispersion comprising 100 parts by weight of component A), 0.1 to 1.0 parts by weight of component B), 0 to 0.45 parts by weight of component C) and optionally component D) according to claim 1 for food coating.

15 16. The use of a food-coating composition as claimed in claim 1 in the production of hard cheese.